

PUBLIC SERVICE COMMISSION OF WISCONSIN AND DEPARTMENT OF NATURAL RESOURCES

APPLICATION FILING REQUIREMENTS FOR FOSSIL FUEL ELECTRIC GENERATION CONSTRUCTION PROJECTS

Version 12A / February 2012

General Instructions

The application filing requirements in this document apply to all electric power plant projects, except wind energy projects, that require either a Certificate of Authority (CA) under Wis. Stat. § 196.49 or a Certificate of Public Convenience and Necessity (CPCN) under Wis. Stat. § 196.491 from the Public Service Commission of Wisconsin (PSC) as well as any Department of Natural Resources (DNR) permits necessary for the construction of such a project.¹

Participating State Agencies:

The application filing requirements in this document list the basic information and format required by the PSC and DNR for applications to construct electric generation facilities in Wisconsin. The information will be used by the PSC and DNR in the preparation of either an Environmental Impact Statement (EIS) or an Environmental Assessment (EA) and to support applications for DNR permits.

Pre-application Consultation Process:

Pre-application consultation is required by law under Wis. Stat. § 30.025 (1m). The purpose of pre-application consultation is to help applicants refine the project application, and to facilitate efficient regulatory review. Applicants should schedule pre-application consultation meetings with agency staffs well in advance of filing an application with the PSC. Consultation is also strongly recommended for projects not subject to permits under Wis. Stat. § 30.025. The filing requirements in this document will apply to most generation facility construction projects. However, the state recognizes that all projects are not the same and that the information needed for one project will not necessarily be appropriate for the next. For some projects, a complete application may require less information than is listed in this document. For this reason pre-application consultation with the agencies is extremely important. Early in the consultation process, agency staff will identify staff contacts, clarify which information requirements apply to the specific project application, and explain important elements of the state's review process.

Other Required Facilities:

The operation of a new power plant may also require construction of ancillary facilities such as new electric transmission lines, gas or water pipelines, roads, rail lines, or waste handling

¹ The data required in this Application Filing Requirement are needed in order for the Commission to meet its obligations under Wis. Stat. §§ 1.11, 1.12, 30.025, 182.017, 196.025, 196.377, 196.49, and 196.491 and Wis. Admin. Code chs. PSC 4, 111, and 112.

facilities. During the pre-application consultation phase, all ancillary facilities required for the project to operate at full capacity must be identified. At that time Commission and DNR staff will work with the applicant to determine what information on ancillary facilities will be required for a complete power plant application. Ideally, when a generation project requires construction of additional facilities, the CPCN application should also meet the application filing requirements for those facilities (Parts 2.00 – 4.00 - see listing below). However, a variety of factors may make this impossible. Because the Commission must review and take final action on a CPCN application within 180 days of finding an application complete, (following a 30-day application completeness review), it is critical that the applicant have a clear understanding of what information will be necessary for the review of the project. All the information required for a complete application will be identified during the pre-application consultation process.

Application Filing Requirements

- **Part 1.00** Information requirements for construction of an electric generation facility under Wis. Stat. § 196.49 or § 196.491;
- **Part 2.00** Information requirements for electric transmission lines and substations;
- **Part 3.00** Information requirements for a natural gas pipeline to serve a proposed generation facility.
- **Part 4.00** Information requirements for a large water pipeline (supply and/or discharge). Use the requirements in Part 4.00 as a guide for other underground facilities associated with the project (e.g. steam lines, wastewater discharge pipelines, sanitary sewer lines etc.)

Biological Surveys:

Biological (plant and/or animal) surveys may be required for projects that have the potential to impact important natural resources. Natural resources of particular concern include high quality terrestrial and aquatic habitats, rare plants and animals, important wetlands and water bodies, and other rare or important habitat types (grasslands, boreal forests, etc.). Areas where endangered, threatened or special concern species and/or habitats occur are also of concern.

At the beginning of the pre-application consultation process, agency guidance regarding the kind and type of surveys required for a specific application will be provided. In order for agency staff to provide such guidance, appropriate data including a proposed project schedule, description of major project actions and current aerial photos, in digital format, will be required in advance of any pre-application meetings. Information on the project will then be used by agency scientists to provide detailed guidance on the type and timing of biological surveys. In order for the agencies to provide meaningful guidance on this issue, this information needs to be provided at least 2-4 months before the beginning of the survey season. In Wisconsin, the field season begins in mid-May. Applicants must meet with agency staff early enough to ensure that field surveys will occur at times when the resource elements can be most accurately evaluated.

Application Completeness:

The regulatory review process starts only when the state receives a complete application. PSC and DNR staff will examine the application during the 30-day completeness review period as required under Wis. Stats. §196.491(3)(a)(2). The PSC will notify applicants by letter regarding whether an application is or is not complete. For incomplete applications, the letter will provide a list of information items that must be provided in order to have a complete application.

In practice, most applications require significant modification before they can be determined complete. For incomplete applications, applicants will be required to provide additional information and/or analyses, as outlined in the determination of completeness. This process can result in a confusing array of application documents that contain both modified and outdated information, often created under separate covers and organized in a variety of formats. In order to provide complete, accurate, and well organized applications for PSC and DNR staff, the PSC Commissioners, and the public, applicants will be required to resubmit their applications after fully integrating all responses to staff's completeness questions. Applicants should consult with the PSC case coordinator to determine how many paper copies of the integrated application that will be required. Subsequent 30-day completeness review periods will begin after paper copies of the integrated applications are received at the Commission.

The PSC must review and take final action on complete applications within 180 days of the date the application is judged complete. The PSC may petition the Circuit Court for an additional 180 days for project review and decision making.

Applicants should be aware that complete applications rarely answer all the questions that the state agencies must address. It is certain that applicants will be called upon to provide additional information and data to the state. These information and data needs are very often critical to agency review and the decision making process. Applicants must respond to all staff inquiries made subsequent to a determination of completeness in a timely, complete, and accurate manner.

DNR Permits:

DNR air quality, wastewater discharge, high capacity well, surface water diversion, erosion control, solid and hazardous waste, and wetland and waterway permits may be required for a project. Depending on the location and type of power plant and ancillary facilities being proposed, other DNR permits and approvals may be required. These may include permissions and easements to place facilities on state-owned lands under DNR management.

By following these Filing Requirements and by participating in the pre-filing collaborative process an application will include most of the information required to issue DNR permits (with the exception of air pollutant emissions permits). It is important to understand that even though an application is deemed complete for CPCN and CA purposes, additional information and modifications to project plans may be needed before the DNR can issue the required permits.

Electronic Regulatory Filing System:

Applications must be filed electronically using the PSC's Electronic Regulatory Filing (ERF) system. Project plans required under Wis. Stat. §196.491(3)(a)(3) must be filed with the DNR. Do not file a copy of the project plan using ERF. Instead file a letter confirming that the project plan has been filed with the DNR. Include the date the project plan was filed.

Instructions for filing under the ERF can be found at the following web site:
http://psc.wi.gov/apps/erf_public/default.aspx.

Applicants should also provide to PSC staff an electronic copy of the application in the latest version of Microsoft Word. If tables have been created in Microsoft Excel, then applicants must also provide digital copies of the Excel spreadsheets. In addition, provide a copy of the application and supporting maps and diagrams on CD or DVD, with the documents in *.PDF format. Copies of this CD/DVD will be provided to members of the public upon request. The files on the CD/DVD should be well organized, such that a person not familiar with PSC filings can easily locate desired information.

Paper copies, of the entire CPCN application must be received by the Commission before the state's 30-day completeness review period begins. Provide 25 copies² of the application for Commission use, plus one copy for each clerk and library as required by Wis. Stats. § 196.491(3)(a)1. Applicants should contact the PSC case coordinator for their project to verify the number of paper copies required for the project. In addition to paper copies of the application; paper and digital copies of all maps, engineering diagrams, facility layouts, and aerial photographs must also be provided to PSC staff. Paper copies are also required for DNR staff review. Questions about the number and format of maps, photos, and diagrams can be answered during the pre-application consultation meetings or by contacting the PSC case coordinator. Paper copies are also required for CA applications. Consult with the PSC case coordinator to determine the proper number of copies to provide.

Reduction of Paper:

Applicants are required to minimize the physical size of their applications by eliminating superfluous information and bulk information not material to the case. The following examples should be used as a guide:

- When submitting required information such as local ordinances, land use plans or other local and county planning documents, only submit those pages relevant to the information requirement, i.e. pages specific to land use controls, safety, or noise. If the entire document is needed for context, the PSC will have the applicant file a copy under a separate cover.

² Twenty-five copies are required in large part because the Commissioner's Office (CO) and the Office of General Council (OGC) must receive copies of the application in addition to project staff. Multiple copies of the application are needed in the CO since each Commissioner and Executive Assistant must be supplied with paper copies of the application. In addition, the OGC typically requires a copy for the General Council and one each for the attorneys assigned to the case. Members of the division's Core Management Team must also receive copies.

- Minimize duplicative information. For example, if certain information, such as a Developer's Agreement, is applicable to more than one section of the CPCN application, include the entire document as an Appendix and reference it in the application text.
- When submitting correspondence between the applicant and state, local, and federal government permitting, planning, and land management agencies, submit only copies of "official" correspondence, i.e. letters from the applicant to an agency and the agency response to the applicant. PSC staff needs to review this correspondence to verify that the applicant has applied for the necessary permits and to ascertain the status of the permit review. Do not include unofficial minutes of meetings or records of telephone conversations between the applicant/applicant's consultant and permitting agencies as these documents represent hearsay and are not considered factual information.
- Submit applications on double-sided printed pages. This includes the text of the application as well as copies of supporting documentation submitted in the application. Exceptions to this requirement are large maps and figures (sized larger than 8 1/2 x 11 inches).

Important notes on digital forms of graphics:

- All required drawings and maps identified in sections 1.1.11 and 1.2 must be supplied in both hard copy and digital formats.
 - Digital GIS map formats:
 - Provide map files in .mxd format for all GIS maps in the application.
 - Provide published map files in .pmf format for all GIS maps in the application.
- Scale drawings of proposed plant facilities must be in AutoCad *.dwg format or *.dxf format (check with PSC staff for the appropriate AutoCAD release). The preference is *.dwg.
- Geographic Information Systems (GIS) data files must be submitted in Shapefile format (ESRI ArcGIS 9x). All GIS data submitted must be projected to Wisconsin Transverse Mercator (WTM), a projection system unique to Wisconsin and used by Wisconsin state agencies. The WTM uses North American Datum (NAD) 83/91. The projection parameters for WTM are:

Projection	Transverse Mercator
Spheroid	GRS80
Scale Factor at Central Meridian	0.9996
Longitude of Central Meridian	90° W (-90°)

Latitude of Origin	0°
False Easting	520,000
False Northing	-4,480,000
Unit	meter

- Photographic renderings of proposed facilities on the existing landscape must be submitted in a high-resolution uncompressed *.tif format (preferred) or high-resolution *.jpg format.
- Digital versions of aerial photographic images of the existing landscape at the proposed plant site/sites **MUST** be suitable for use on the PSC's GIS platform. **DO NOT** obscure any portion of the aerial photographic images provided in the application. Digital aerial photographic images must be properly georeferenced. All digital aerial photographic images **MUST** be accompanied by the geographic coordinate and projection system to which they have been georeferenced.
- Scanned maps and diagrams which cannot be submitted in any other format must be submitted in *.gif format at a depth of 256 colors or less.
- When providing maps, note facility locations but do not obscure map details.

Direct questions concerning these information requirements to Dan Sage of the PSC staff, at (608) 267-9486, e-mail dan.sage@wisconsin.gov.

Part 1.00 – Application Filing Requirements for Construction of an Electric Generation Facility (100 MW or greater)

A generation facility of 100 MW or greater requires an application for a Certificate of Public Convenience and Necessity (CPCN). **A complete CPCN application will contain the information listed in this document. Exceptions will be documented during the pre-application consultation process. Information that an applicant believes does not apply to the proposed project may not be omitted without a showing as to why the information is not applicable. Applications must follow the organization and format of these filing requirements.** For smaller power plant projects proposed by a Wisconsin electric utility where cost exceeds the thresholds in Wis. Admin. Code § PSC 112.05(3), a Certificate of Authority (CA) will be required. These filing requirements also apply to CA projects. Applicant should consult with Commission staff prior to submitting an application.

Site Alternatives:

The Commission must evaluate and consider alternative sites (as defined in Wis. Stat. § 196.49(1)(w)) whether a proposed electric generating facility is utility owned or a wholesale merchant plant. Therefore, the information requirements listed in this document must be provided for at least **two viable** project sites. Adequacy of site alternatives should be confirmed early in the pre-application consultation process.

1.1 PROJECT DESCRIPTION AND OVERVIEW

1.1.1. Identify the corporate entity or entities that would own and/or operate the plant.

Items 1.1.2-1.1.4 do not apply to wholesale merchant plants as defined by Wis. Stat. § 196.491 (1)(w). However, merchant plant applicants seeking single site review for brown field sites, as described above, must file information under Section 1.1.3.5

1.1.2. Describe the purpose or need for the project with supporting data, including an energy efficiency analysis.

1.1.2.1. Monthly demand and energy forecast for peak and off peak periods over the next 20-25 years.

1.1.2.2. Using EGEAS, describe the 25-year optimal generation expansion plan for all of the entities that are part of the generation plan.

1.1.2.3. Describe how the availability of purchase power was analyzed.

1.1.2.4. Identify plant retirements forecast over the next 20-25 years.

- 1.1.2.5. Describe how the existing and expected applications for generation from Independent Power Producers (IPPs) have been factored into your forecast.

1.1.3. Alternatives

Supply Alternatives: Describe the supply alternatives to this proposal that were considered (including a “no-build” option) and present the justification for the choice of the proposed option(s). If the project is not a cogeneration project, explain why it is not.

This discussion must also consider the Renewable Portfolio Standard enacted in 2005 and Wisconsin’s Energy Priorities listed under Wis. Stat. § 1.12(4). Specifically, Wis. Stat. § 196.025 requires the Commission to consider these priorities, in the order listed, in making all energy-related decisions to the extent that they are cost-effective, technically feasible and environmentally sound. (Energy conservation and efficiency need not be considered in light of Wisconsin Act 141 which provides utility funding for energy efficiency programs) Provide analyses that examine the proposed project’s cost-effectiveness, technical feasibility, and environmental compatibility with respect to the following energy priorities.

- 1.1.3.1. Noncombustible renewable energy resources.
- 1.1.3.2. Combustible renewable energy resources.
- 1.1.3.3. Nonrenewable combustible energy resources, in the order listed:
 - 1.1.3.3.1. Natural gas.
 - 1.1.3.3.2. Oil or coal with a sulfur content of less than 1 percent.
 - 1.1.3.3.3. All other carbon-based fuels.
- 1.1.3.4. **Site Selection Process:** Describe the site screening and selection process used to determine the proposed site.
 - 1.1.3.4.1. List individual factors or site characteristics used in site selection.
 - 1.1.3.4.2. Provide information on how individual factors and site characteristics were weighted for your analysis and why specific weights were chosen.
 - 1.1.3.4.3. Provide a list of all sites reviewed with weighted scores for each siting factor or characteristic used in the analysis.
 - 1.1.3.4.4. Provide a narrative describing why the final site was chosen.
- 1.1.4. **Cost:** Provide a detailed list of the capital cost of the completed facility and all related facilities as described below.
 - 1.1.4.1. Construction cost of facilities.
 - 1.1.4.2. Describe and provide the complete terms and conditions of any lease arrangements.

- 1.1.4.3. Identify what air pollution control requirements were assumed in making the project cost estimate.
- 1.1.4.4. Identify/justify the costs used for the purchase power forecast.
- 1.1.4.5. Identify/justify the fuel forecasts used over the 20-25 year study period (\$/MBTU, coal, gas, oil).
- 1.1.4.6. Identify the affiliated interest approvals required for each unit.
- 1.1.4.7. Provide a statement demonstrating how conditions of Wis. Stat. § 196.52(9)(a)3(b) have been met.
- 1.1.4.8. Discuss and provide the comparative costs of the alternatives identified and evaluated in Section 1.1.3.
- 1.1.4.9. Identify the cost of the proposed project compared to a rate-based proposal or competitive bids received.
- 1.1.5. Describe the type of power plant proposed (technology and major components required) including any planned additions, possible expansions or other modifications that have been evaluated for the future. (e.g. conversion from simple to combined cycle)
- 1.1.6. Describe the effect of the proposed project on wholesale market competition.
- 1.1.7. Describe, in detail: connecting pipelines (gas, water, or steam), any planned discharge to truck, or storage tank needed. Include details on fuel transport and storage (e.g. oil tank, rail line), water supply and discharge, and steam delivery. For steam lines include the size and operating pressure of proposed lines, steam customers or clients, and where and how the lines will be built. (For guidance on application requirements for buried water pipelines see Filing Requirements Part 4.00 – Filing Requirements for Water Pipeline Construction Projects.)
- 1.1.8. Identify any electric transmission and/or natural gas interconnections needed. Include information on who will build the transmission line or gas pipeline and interconnection. Applicant must confer with PSC and DNR staff in order to ascertain the type of information needed concerning transmission and pipeline facilities required for the project (Refer also to Filing Requirements Part 2.00 - Filing Requirements for Electric Transmission Construction Projects – (See the PSC web site at: <http://psc.wi.gov/utilityinfo/electric/construction/transmissionLineRequirements.htm>) and Filing Requirements Part 3.00 - Filing Requirements for Natural Gas Pipelines (See the PSC web site at: <http://psc.wi.gov/utilityinfo/gas/newsInfo/pipelineConstruction.htm>)

1.1.9. Identify any potential for secondary industrial or commercial development that may seek to utilize excess heat or steam energy from the project. Include both the long-term potential as well as any short-term plans for future steam customers.

1.1.10. Provide an estimate of the expected life span for the power plant.

1.1.11. Project Drawings and Photo Simulations

1.1.11.1. Provide detailed scale drawings of all the proposed plant facilities for both sites; include a measurement of the physical size of the project as defined by the project boundary.

1.1.11.2. Provide both hard and digital copies of all drawings. (See the section entitled Important Notes on Digital Forms of Graphics on page 5)

1.1.11.3. Photo simulations are also desirable. *(In order to be certain that any photo simulations provided in an application will be useful, **please consult with PSC staff before preparing and submitting photos.**)*

1.1.12. Workforce

1.1.12.1. Provide information on the workforce size and skills required for plant construction and operation.

1.1.12.2. Identify the expected source of work force for construction and operation.

1.1.13. Expected Hours of Operation

Estimate the expected hours of operation and capacity on a daily, weekly, seasonal, and annual basis.

1.1.14. Fuel

1.1.14.1. Identify the types of fuel (primary and backup), and likely fuel source(s).

1.1.14.2. Provide an estimate of the fuel quantity to be used, for the following modes, in million Btu per hour:

1.1.14.2.1. Half load operation

1.1.14.2.2. Rated load operation

1.1.14.2.3. Maximum capacity operation

1.1.15. Fuel – Coal Plant: For a coal plant, provide the following information.

1.1.15.1. Identify the coal source and composition

1.1.15.2. Identify coal transportation and delivery methods, location and route to on-site coal and ash handling facilities.

1.1.15.3. Identify coal storage locations (on-site or off-site).

- 1.1.15.4. Identify location and capacity of solid waste reuse/recycling and disposal facilities (on site or off site landfill meeting WDNR requirements).
- 1.1.15.5. Provide a diagram of coal handling, from delivery through storage and end use/disposal.
- 1.1.15.6. Provide separate water balance for ash handling and describe any WPDES requirements resulting from ash handling water discharges (WPDES discussion can be addressed in Section 1.2.22. Discuss storm water management in detail in Section 1.2.23.).

1.1.16. **Technical Parameters**

- 1.1.16.1. Provide the expected operating characteristics for the project:
 - 1.1.16.1.1. Heat rate
 - 1.1.16.1.2. Equivalent availability and capacity factors.

- 1.1.16.2. Provide heat balances for the following operating modes:
 - 1.1.16.2.1. Rated load operation
 - 1.1.16.2.2. Maximum capacity operation.

- 1.1.17. Provide water balances for the operating modes listed below. In the analysis include:
 - volume/rates into the cooling tower,
 - evaporative losses,
 - cooling tower blowdown,
 - power augmentation,
 - evaporative coolers,
 - demineralizer usage,
 - steam system blowdown,
 - potable water,
 - fire protection/control
 - any other uses.

Operational Modes - provide flows in gallons per hour:

- 1.1.17.1. Half load operation
- 1.1.17.2. Rated load operation
- 1.1.17.3. Maximum capacity operation
- 1.1.17.4. Maximum operation in summer (90°F)
- 1.1.17.5. Maximum operation at average temperature (44°F)
- 1.1.17.6. Maximum operation in winter (0°F)

- 1.1.18. **Required Permits and Approvals:** Provide a list of required approvals from the following regulatory bodies listing the approvals required, the status of each approval application, filing date of permit or approval application, permitting agency, contact name, and telephone number:

- 1.1.18.1. Federal

- 1.1.18.2. State
- 1.1.18.3. Local permits (county, town, city).

- 1.1.19. **Correspondence:** Provide copies of correspondence to and from permitting agencies that relate to permit approval or compliance approval. Copies of any correspondence to or from local governments. This should continue after submittal of the CPCN application (refer to page 5 of this document).
- 1.1.20. **Schedule:** Provide an estimated schedule for permitting and construction. Include a timeline showing construction activities from beginning of construction to in-service including a breakdown by facility and major component. Identify all critical path items.
- 1.1.21. Provide a description of all major construction activities including any temporary roads, dewatering wells, stream enclosures or re-routing, or other facilities or landscape changes required during construction.
- 1.1.22. Provide a list of all hazardous chemicals to be used on site during construction and operation (including liquid fuel), plus spill containment and cleanup measures. Discuss SPCC and Risk Management planning for the chemicals used.

1.2 Natural and Community Resources, Description and Potential Impacts

Provide the following types of maps for each site alternative: Both hard copy and digital versions must be supplied. Hard-copy maps, diagrams, and plant layouts must be legible and large enough to accommodate an appropriate scale. Digital copies must be suitable for use on an ESRI ArcGIS platform. Refer to pages 5-6 for guidance on digital formats. It is advised that applicants consult with PSC and DNR staff before submitting digital data.

1.2.1. Plant and Facility Maps

- 1.2.1.1. Provide a map showing the location of all proposed sites that clearly shows their location in relation to major geographic features (such as highways, nearest city, lake or large river) so that locations are easily identifiable.
- 1.2.1.2. Provide a map of each site showing the locations or routes of all proposed facilities.
- 1.2.1.3. Provide additional maps (if necessary) showing proposed location of any connecting facilities (e.g. electric transmission lines, natural gas pipelines, or steam lines).

1.2.2. Maps –Natural Resources (All the following maps should be the most recent version available and extend a minimum of one half mile from the proposed project boundaries.)

- 1.2.2.1. Plat maps showing land ownership and the proposed facilities.

- 1.2.2.2. USGS topographic maps (1:24,000 scale).
- 1.2.2.3. Original WDNR wetland maps showing the location of project site and connecting facilities without obscuring map details (highlighter works well). If available provide digital versions of WDNR wetland maps.
- 1.2.2.4. Map(s) showing existing land use (e.g. agriculture, recreation)/land cover (e.g. forest, grasslands).
- 1.2.2.5. Map of all publicly owned lands within one-half mile of the project site (parks, national/county/state forests, etc).
- 1.2.2.6. Flood plain maps (Flood Insurance Rate Maps (FIRM)) if the site is within one-half mile of a flood plain.
- 1.2.2.7. Soil survey map.
- 1.2.2.8. Recent (within last three years) aerial photos in hard copy of the site at a scale of 1:4800 or larger. Photos should show at least one mile beyond the generation site boundaries. DO NOT obscure any portion of the photographic images provided in the application. Describe any changes to the area since the photos were taken. In a rapidly developing area, more recent air photos may be required. Consult with PSC staff regarding age of photos.

1.2.3. **Community Maps**

- 1.2.3.1. Map showing existing zoning within one-half mile of the site.
 - 1.2.3.2. Map at community scale showing roads, streets, city or township boundaries, etc.
 - 1.2.3.3. Map showing site in relation to nearest residences and other buildings, indicating distances to both the site boundary and the plant footprint.
 - 1.2.3.4. Additional map (if necessary) showing proximity to schools, day care centers, hospitals, and nursing homes up to one-half mile from the site.
 - 1.2.3.5. Plat maps showing land ownership in and around the proposed facility.
- 1.2.4. Provide all current digital aerial photographs and land use and zoning maps that are maintained by local units of government for each site. GIS data must be properly projected in order to be considered acceptable (see pages 5 & 6).
- 1.2.5. Provide township, range, and nearest ¼, ¼ section information for the plant site.

1.2.6. **History of Site**

Describe the history of use for each generation site, including any uses that could have resulted in site contamination (petrochemical storage, fertilizer or pesticide use etc.) and any remediation conducted on the site. If no remediation has been performed on a contaminated site, describe what must be done in order for the project to proceed.

1.2.7. Current Land Ownership

Identify current land ownership and any activities or plans for temporary or permanent acquisition of lands or rights-of-way from landowners. Include plat maps indicating proposed acquisitions. State whether or not applicant has an option to purchase for each site under review.

1.2.8. Local Zoning

- 1.2.8.1. Provide copies of any zoning ordinances affecting the project site and the area within one-half mile of the site boundary (provide only page(s) directly citing ordinance language).
- 1.2.8.2. Describe zoning and land use changes needed for the project.
- 1.2.8.3. Describe zoning and land use changes that the applicant has requested of local government for the proposed project. Report the name of the entity responsible for zoning changes, the process required to make a zoning change, and the outcome or expected outcome for those changes.

1.2.9. Land Use Plans

- 1.2.9.1. Provide a copy of any land-use plans adopted by local governments within one-half mile of the project boundary. Include not only general land-use plans, but also other relevant planning documents such as county recreation plans, farmland preservation plans, highway development plans, and sewer service area plans (see direction under Reduction of Paper section on page 4 – item number 1.

1.2.10. Site Geology

- 1.2.10.1. Describe the geology of each site.
- 1.2.10.2. Identify any special conditions (e.g. type and depth to bedrock, unusual soil conditions etc.) related to site geology that might create unusual or special circumstances requiring special methods or management during construction.
- 1.2.10.3. Describe any impact on geological formations (soils, glacial deposits, bedrock) for each site. Note location of active mines or quarries within one half mile.

1.2.11. Zoning and Land Cover Impact

- 1.2.11.1. Zoning Classifications
 - 1.2.11.1.1. List the total number of acres in each existing zoning classification on all proposed sites
 - 1.2.11.1.2. List the number of acres impacted by the project in each existing zoning classification

1.2.11.2. Land Cover

- 1.2.11.2.1. List the total number of acres in each land cover type on all proposed sites.
- 1.2.11.2.2. List the number of acres impacted in each land cover type for all proposed sites.

1.2.12. Impact to Topography

- 1.2.12.1. Describe the general topography of each site and surrounding area.
- 1.2.12.2. Describe expected changes to site topography due to grading activities.

1.2.13. Construction Areas

- 1.2.13.1. Identify size and location of laydown areas, material storage.
- 1.2.13.2. Identify size and location of construction parking areas.
- 1.2.13.3. Describe the expected use of these areas after project completion.
- 1.2.13.4. Describe any plans for post-construction site restoration.

1.2.14. Soil

- 1.2.14.1. Identify and discuss the properties of each soil type on each site.
- 1.2.14.2. Discuss the expected impacts on soils, including volume or tonnage to be excavated.
- 1.2.14.3. Describe where mitigation may be required and what techniques would be used (e.g. topsoil segregation). Include information on how excess soils will be handled.

1.2.15. Existing Vegetation and Wildlife Populations

- 1.2.15.1. List and locate the existing vegetation communities on each site.
- 1.2.15.2. Provide observations of prevalent animal and plant species observed during site visits. Information provided should be adequate to characterize the habitat quality of the site accurately.
- 1.2.15.3. Describe expected impacts to plant and animal habitats and populations.

1.2.16. Archeological and Historic Resources

If after consultation with the Wisconsin Historical Society (WHS) and PSC staff, the work of a qualified archeologist is required, reference the archeologist's report in the application.

- 1.2.16.1. Provide a list of all historic and archeological sites potentially affected by the proposed project.³
- 1.2.16.2. For each proposed site, list the county, town, range, section and ¼, ¼ section in which construction would occur.
- 1.2.16.3. For each archeological or historical resource identified, describe how the proposed project might affect the resource and how the project could be modified to reduce or eliminate any potential effect on the resource. Modifications to the proposed project could include site modification, route changes (for connecting facilities – transmission lines and pipelines), and construction practices.

1.2.17. Endangered, Threatened, and Special Concern Species and Communities

- 1.2.17.1. Provide an endangered resources review for each site using the Wisconsin Natural Heritage Inventory (Consultation with the DNR Office of Energy's endangered resources review specialist is recommended before providing this information). The review should include state or federally listed threatened or endangered species, Wisconsin species of special concern, and natural communities within one mile of the area of disturbance including temporary or new permanent access routes for each site. A larger review area may be warranted in cases where there is contiguous habitat extending beyond one mile or where streams and aquatic habitat may be affected. Also provide a description of potential impacts to endangered resources based on existing habitat conditions and project actions during construction and operation as well as proposed measures to avoid or minimize such impacts.
- 1.2.17.2. Include a map indicating the location of identified resources relative to the construction and operational footprint of each alternative, including temporary and new permanent access routes.
- 1.2.17.3. Discuss the potential for impacts to endangered, threatened, and special concern species and communities relating to the construction and operation of ancillary facilities including rail extensions and yards, barge fleeting areas, pipelines and transmission lines needed for full operation of the project. (If applying for authority to construct these facilities concurrently with the power plant CPCN application provide the information as part of the appropriate application filing requirements (i.e. Part 2.00 for transmission lines; Part 3.00 for natural gas pipelines etc.)

³ This information is available from the WHS, Wisconsin Historic Preservation database (WHPD), which may require a fee or subscription. Qualified archeologists generally have access to the WHPD database.

1.2.18. Air Pollutant Emissions and DNR Air Quality Permit

For instructions on filing for DNR air quality permits visit the DNR website at:
<http://dnr.wi.gov/org/aw/air/permits>

The following items are needed in order to provide adequate disclosure in PSC and WEPA review documents. Provide the following information for all sites (as appropriate for the technology being proposed).

- 1.2.18.1. List the DNR air permits required for the project and the status of air permit applications
- 1.2.18.2. Provide a narrative of the air emissions modeling and results. Include the following:
 - 1.2.18.2.1. Type(s) of fuel to be used.
 - 1.2.18.2.2. The control technologies expected to be required for the project (include methods or plans to control mercury emissions if the proposed plant will burn coal). Include a diagram of the boiler and any pollution controls.
 - 1.2.18.2.3. Estimated hourly emission rates in pounds per hour at full, 75%, 50%, and 25% load for:
 - 1.2.18.2.3.1. NO_x
 - 1.2.18.2.3.2. CO
 - 1.2.18.2.3.3. Mercury
 - 1.2.18.2.3.4. PM₁₀, PM_{2.5}
 - 1.2.18.2.3.5. SO₂
 - 1.2.18.2.3.6. VOCs,
 - 1.2.18.2.3.7. H₂SO₄
 - 1.2.18.2.3.8. Lead
 - 1.2.18.2.4. Estimated maximum expected annual emission rates from project sources for the pollutants listed in Section 1.2.18.2.3.
 - 1.2.18.2.5. Projected emissions in tons-per-year (tpy), by source and for the entire plant, for the pollutants listed in Section 1.2.18.2.3.
 - 1.2.18.2.6. How will the proposed project affect air quality in relation to NAAQS and PSD increments
 - 1.2.18.2.6.1. Provide background ambient levels for criteria pollutants in micrograms per cubic meter at 1, 3, 8, & 24 hour intervals. Also provide annual totals, if available.
 - 1.2.18.2.6.2. Provide modeling results comparing expected project emissions with the NAAQS (include the expected impact distance and direction).
 - 1.2.18.2.6.3. Provide all PSD increment modeling results, including those for known pollutants that did not hit the significance threshold.

- 1.2.18.3. Provide existing background concentrations on PM_{2.5} and expected annual emissions (tpy) for each unit relevant to state and federal requirements
- 1.2.18.4. Provide expected annual emissions (tpy) of CO₂, N₂O, and CH₄ by source and for the entire plant. Include emissions associated with other plant inputs besides the boiler fuel itself.
- 1.2.18.5. Provide tables listing annual organic and inorganic hazardous air pollutant (HAP) emission estimates, with an estimated tpy emitted for each HAP and a total estimated tpy for all HAP emissions.
- 1.2.18.6. Dust Control
 - 1.2.18.6.1. Discuss dust control measures to be used during and after construction.
 - 1.2.18.6.2. For a coal plant, include a discussion of measures to be taken to control fugitive dust emissions from coal storage piles, coal handling and conveyance.

1.2.19. **Waterways and Wetlands**

1.2.19.1. **Waterway (lake/flowage, pond, river, or stream) Impacts**

- 1.2.19.1.1. Identify all lakes, flowages, ponds, and streams on and near each project site. Indicate which would be considered navigable waters of the state under Ch. 30. Include all waterways within ½ mile of each project boundary.
- 1.2.19.1.2. Evaluate the potential impacts to each waterway.
- 1.2.19.1.3. Identify waterways crossed by connecting facilities.

1.2.19.2. **Wetlands:** If site construction would affect any wetland (on or off the proposed sites) provide:

- 1.2.19.2.1. A map of the proposed facility and wetland boundary delineations using all forms and information required by and in accordance with the January 1987 Technical Report Y-87-1 entitled, “Corps of Engineers Wetland Delineation Manual,” including relevant guidance documents.
- 1.2.19.2.2. A description of the wetland type using the Wisconsin Wetland Inventory (WWI) classification, and wetland type identified by plant community type (shallow open water, deep marsh, shallow marsh, seasonally flooded basin, bog, floodplain forest, alder thicket, sedge meadow, coniferous swamp, calcareous fen, wet meadow shrub-carr, low prairie, hardwood swamp).
- 1.2.19.2.3. List the presence or absence of invasive species in wetlands noting whether they are dominant.
- 1.2.19.2.4. Determine if any wetlands affected are in or adjacent to an area of special natural resource interest (NR 103.04, Wis. Adm. Code) as listed below
 - 1.2.19.2.4.1. Cold Water Community as defined in § NR 102.04(3)(a), Wis. Adm. Code, including trout streams, their tributaries, and trout lakes.
 - 1.2.19.2.4.2. Lakes Michigan and Superior and the Mississippi River.
 - 1.2.19.2.4.3. State- or federally-designated Wild and Scenic River.

- 1.2.19.2.4.4. State-designated riverway.
 - 1.2.19.2.4.5. State-designated scenic urban waterway.
 - 1.2.19.2.4.6. Environmentally sensitive area or environmental corridor identified in an area-wide water quality management plan, special area management plan, special wetland inventory study, or an advanced delineation and identification study.
 - 1.2.19.2.4.7. Calcareous fen.
 - 1.2.19.2.4.8. State park, forest, trail or recreation area.
 - 1.2.19.2.4.9. State and federal fish and wildlife refuges and fish and wildlife management area.
 - 1.2.19.2.4.10. State- or federally-designated wilderness area.
 - 1.2.19.2.4.11. State-designated or dedicated natural area (SNA).
 - 1.2.19.2.4.12. Wild rice water listed in § NR 19.09, Wis. Adm. Code.
- 1.2.19.2.5. **Practicable alternatives analysis:** Chapter NR 103, Wis. Admin. Code, Water Quality Standards for Wetlands, requires the applicant to demonstrate that all practicable alternatives to avoid and minimize wetland impacts have been considered. The term “practicable” is defined in the administrative code as, “... available and capable of being implemented after taking into consideration cost, available technology and logistics in light of the overall project purposes.” The following is more detailed guidance on the practicable alternatives analysis.
- 1.2.19.2.5.1. Describe how wetlands were factored into the site selection process.
 - 1.2.19.2.5.2. Describe how the design of proposed facility avoids and minimizes wetland impacts.
 - 1.2.19.2.5.3. Provide documentation of costs, technological constraints and logistical reasons why other sites or other site configurations are not practicable to avoid and minimize wetland impacts.
 - 1.2.19.2.5.4. If wetland impacts cannot be avoided, describe the construction and restoration methods that are planned to minimize wetland impacts.

1.2.20. **Water Source, Consumption, and Discharge – General**

- 1.2.20.1. Identify and fully describe all sources of water required for the project.
- 1.2.20.2. For each unit report the expected water volume usage in daily, monthly, and annual averages.
- 1.2.20.3. Report total consumptive use/net loss of water from water source (e.g. contact or non-contact cooling, plant processes, once through cooling, evaporative cooling etc.). Refer to Wis. Stat. § 281.35 regarding water loss approvals

1.2.21. **Water Source – Specific**

- 1.2.21.1. **On-Site Low-Capacity Well (< 70gpm)** – Provide information on:
 - 1.2.21.1.1. Location and size and number of wells.
 - 1.2.21.1.2. Depth of wells.
 - 1.2.21.1.3. Maximum pumping capacity.

- 1.2.21.1.4. Expected impact to residential and municipal wells.
- 1.2.21.1.5. Mitigation/compensation plan in the event impacts to residential and commercial wells occurs.

1.2.21.2. **On-Site High-Capacity Well** (> 70 gpm)

- 1.2.21.2.1. Prepare applications for necessary DNR high-capacity well permit. Application materials can be found on the DNR Website at <http://dnr.wi.gov/org/water/dwg/hicap.html>
- 1.2.21.2.2. Prepare an analysis estimating the cone of depression and potential impacts to residences within ½ mile of each proposed site.
- 1.2.21.2.3. Provide a mitigation/compensation plans in the event impacts to residential/commercial wells occur.

1.2.21.3. **Municipal water service:** provide the following information:

- 1.2.21.3.1. Operating water utility and location of supply well(s)
- 1.2.21.3.2. Capacity of municipal well(s) providing service.
- 1.2.21.3.3. Reserve capacity of municipal system.
- 1.2.21.3.4. Impact on ability of municipality to provide water to municipal customers.
- 1.2.21.3.5. Method for delivering water to plant sites
 - 1.2.21.3.5.1. Size of pipeline required.
 - 1.2.21.3.5.2. Proposed routes for pipeline.
 - 1.2.21.3.5.3. Length of proposed pipelines.
 - 1.2.21.3.5.4. Entity or entities constructing, operating and owning the pipeline.
 - 1.2.21.3.5.5. List of landowners along all water supply pipeline routes.

1.2.21.4. **Surface Water**

- 1.2.21.4.1. Identify surface water source
- 1.2.21.4.2. Characterize the biological environment including, but not limited to:
 - 1.2.21.4.2.1. Fish and invertebrate species and communities present.
 - 1.2.21.4.2.2. Mammal and bird use in the immediate area.
 - 1.2.21.4.2.3. Vegetative cover on and near the shoreline.
 - 1.2.21.4.2.4. Impact of water withdrawal on water source and downstream users.

1.2.22. **Water Discharge (See also WDNR WPDES website at <http://www.dnr.state.wi.us/org/water/wm/ww/pmttypes.htm>)**

- 1.2.22.1. Describe location of discharge.
- 1.2.22.2. Report water volume discharge in daily, monthly, and annual averages.
- 1.2.22.3. Describe the location and construction methods for all pipes extending into any surface water body (length, diameter, and composition), draining into the groundwater system, or connecting to any municipal wastewater system.
- 1.2.22.4. If discharging to surface waters, submit the following.

- 1.2.22.4.1. Describe any structure proposed at the end of the pipe (diffuser, screen, etc.). Provide engineering drawings for proposed structure.
- 1.2.22.4.2. Characterize the physical environment including, but not limited to: width, depth, and substrate at the location of intake and outfall structures.
- 1.2.22.4.3. Provide estimates of the average, maximum and minimum daily flows in cubic feet per second.
- 1.2.22.4.4. Provide water quality data in the potentially affected area.
- 1.2.22.4.5. Submit a physical modeling of the effects of the expected intake and discharge on bottom sediments and biota.
- 1.2.22.4.6. Provide a description of methods proposed for invasive mussel control (if applicable).
- 1.2.22.5. Report chemical and physical attributes of the discharge water including, but not limited to, the use and expected concentration of biocides and metals.
- 1.2.22.6. Report the expected temperature of discharge water at the discharge point and variation within the mixing zone. Report the expected variation in temperature and volume on a yearly basis.
- 1.2.22.7. If discharging into surface water or drainage system identify potential impacts to flora and fauna.
- 1.2.22.8. If discharging to local municipality, submit the following:
 - 1.2.22.8.1. Identify municipality and agreements to date regarding quantity and quality of discharge water to be treated.
 - 1.2.22.8.2. Identify secondary impacts, if any, to municipal treatment system and user charges (e.g. will municipality require any expansion or upgrades to receive wastewater).

1.2.23. Storm Water Management

- 1.2.23.1. Provide a storm water management plan that complies with local and state regulations.
- 1.2.23.2. Specifically, discuss the amount of flow it would be designed to handle and the location of the point(s) of discharge.
- 1.2.23.3. FOR COAL PLANTS - describe storm water management plan for coal handling and storage and ash handling and disposal.
- 1.2.24. Describe in detail any on-site wastewater and storm water treatment facilities and identify any solids or sludges generated from such operations. Include a description of any process water pretreatment facilities (demineralizers), blow-down characteristics, and solid waste by-products resulting from water pretreatment.

1.2.25. Solid Waste Handling and Disposal

- 1.2.25.1. Identify any solid waste that would be produced as a result of electricity production (e.g. coal ash and sorbent by-products, scrubber sludge)
- 1.2.25.2. Describe the composition and quantity of waste over the expected life of the plant and how it would be handled.

- 1.2.25.3. Discuss the potential for beneficial use or reuse of ash and other combustion byproducts.

1.2.26. Agricultural Impacts

- 1.2.26.1. Provide information on any ongoing farming activities on the proposed sites.
- 1.2.26.2. Identify the presence of drainage tile or irrigation systems on the proposed sites.
- 1.2.26.3. Provide information on any farmland preservation agreements for the proposed sites.

1.2.27. Noise

- 1.2.27.1. Provide existing and projected noise measurements using the PSC's Noise Measurement Protocol. Noise protocol can be found on the PSC website at: <http://psc.wi.gov/utilityinfo/electric/construction/PowerPlantRequirements.htm>
- 1.2.27.2. Provide copies of any local noise ordinance
- 1.2.27.3. FOR COAL PLANTS, provide estimates of noise impacts from the following coal-specific sources:
 - 1.2.27.3.1. Noise from coal train couplings when coal cars are being staged and moved for emptying.
 - 1.2.27.3.2. Noise from coal unloading either through bottom dump or rotary car dumper.
 - 1.2.27.3.3. Noise generated from rail car type.
 - 1.2.27.3.4. Steam blows for plant start-up.
 - 1.2.27.3.5. Noise from cooling towers

1.2.28. Site Lighting

- 1.2.28.1. Describe the site lighting plan during project construction.
- 1.2.28.2. Describe the site lighting plan for plant operation.
(For both 1 and 2 above contrast the intensity of the proposed lighting scheme and its impact on each site's surroundings.)
- 1.2.28.3. Provide copies of any local ordinances relating to lighting that could apply.

1.2.29. Odors

Identify any odors that may be perceptible outside the plant boundary during both construction and operation.

1.2.30. Fogging and Icing

- 1.2.30.1. Provide an analysis of the potential for road icing or fogging due to operation of the proposed facility for each proposed site, including specific location and duration.
- 1.2.30.2. Submit a fogging probability map, icing probability map, CaCO₃ deposition probability map, and plume length map.

- 1.2.30.3. Discuss mitigation measures contemplated or proposed and whether they are already accounted for in the maps in 1.2.29.2 or would decrease fogging or deposition further.
- 1.2.31. List and describe all proposed mitigation measures (not previously described) to avoid, minimize, and mitigate potential environmental and social impacts caused by construction and operation of the project. Include measures related to natural resource impacts (wetlands and/or habitat loss, etc), noise, aesthetics, health and safety, agricultural impacts, and effects on future land use and property values.
- 1.2.32. Provide a table indicating distance (in feet) to schools, day care centers, hospitals, and nursing homes, up to one-half mile from site boundary.
- 1.2.33. Provide a description of all publicly-owned lands within one-half mile of the project site (parks, county forests, etc.).
- 1.2.34. **Demographics**
 - 1.2.34.1. Provide a description of the area within one-half mile of the proposed sites in terms of population, racial or ethnic composition, and income levels.
 - 1.2.34.2. Provide the same information for the township, county or Standard Metropolitan Statistical Area as a whole.
- 1.2.35. **Local Government Impacts**
 - 1.2.35.1. List all services to be provided by the city, town, and/or county during construction and when the plant is in operation (e.g. water, fire, EMS, police, security measures, and traffic control). Specifically, address community and facility readiness for incidents such as fires, boiler implosions/explosions, coal dust explosions and critical piping failures.
 - 1.2.35.2. **Infrastructure and Service Improvements**
 - 1.2.35.2.1. Identify all local government infrastructure and facility improvements required (e.g. sewer, water lines, railroad, police, and fire).
 - 1.2.35.2.2. Describe the effects of the proposed project on city, village, town and/or county budgets for these items.
 - 1.2.35.3. For each site provide an estimate of any revenue to the local community (i.e. city, village, town, county) resulting from the project in terms of taxes, shared revenue, or payments in lieu of taxes.
 - 1.2.35.4. Describe any other benefits to the community (e.g. employment, reduced production costs, goodwill gestures).
 - 1.2.35.5. List any existing facilities that will be retired as a consequence of the proposed plant (e.g. existing steam plant) and job impact of such retirements.

1.2.36. Construction Traffic

- 1.2.36.1. Describe types of vehicles that will visit and be used on site during construction. Include in the analysis vehicles used by workers arriving to and departing from the construction sites.
- 1.2.36.2. Describe how construction traffic will enter and leave each proposed site.
- 1.2.36.3. Give an estimate of traffic frequency and volume during construction. Include access traffic by workers, equipment and supply deliveries, and any earthmoving equipment.
- 1.2.36.4. Estimate the potential impacts of construction traffic on the local transportation system. In particular provide information on:
 - 1.2.36.4.1. Probable routes for delivery of heavy and oversized plant equipment loads
 - 1.2.36.4.2. Potential for road damage and any compensation for damage.
 - 1.2.36.4.3. Anticipation of any traffic congestion caused by the project.
 - 1.2.36.4.4. Describe any changes in rail line usage and any interference with existing rail traffic.
 - 1.2.36.4.5. Discuss how heavy loads or large loads will be handled.
- 1.2.37. Describe changes in the types and frequency of traffic expected on roads and railroads due to plant operation. Describe expected traffic routes.
- 1.2.38. Describe any permanent changes required to existing roads, railroads, traffic signals, etc., as a result of this project.

1.3 ELECTRIC TRANSMISSION SYSTEM

- 1.3.1. Provide the completed transmission interconnection study report from the transmission provider, including any needed transmission system improvements.
- 1.3.2. Provide a general description of the transmission line facilities required for full operation of the proposed project. Identify transmission line end points, approximate length of line, voltage, and substation and/or switching station requirements. If it is determined during the pre-application phase that a transmission application is required refer to: Application Filing Requirements for Electric Transmission Construction Projects, Part 2.00. Part 2.00 can be found on the PSC website at: <http://psc.wi.gov/utilityinfo/electric/construction/TransmissionLineRequirements.htm>

1.4 OTHER

- 1.4.1. Provide a separate alphabetized list (names and addresses) in Microsoft excel or a compatible program for each of the groups described below.
 - 1.4.1.1. Property owners and residents within one-half mile from the proposed power plant site. It is strongly recommended that applicants consult with PSC staff

in order to ensure that the format and coverage are appropriate considering the project type, surrounding land use, etc.

- 1.4.1.2. Public property, such as schools or other government land.
- 1.4.1.3. Clerks of cities, villages, townships, counties, and Regional Planning Commissions (RPC) directly affected.

- 1.4.2. List and describe all attempts made to communicate with and provide information to the public. Describe efforts to date and any planned public information activities. Provide copies of public outreach mailings.
- 1.4.3. Describe plans and schedules for maintaining communication with the public (e.g. public advisory board, open houses, suggestion boxes, and newsletters).
- 1.4.4. Identify all local media that have been informed about the project. The list of local media should include at least one print and one broadcast.